

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
6 December 2001 (06.12.2001)

PCT

(10) International Publication Number  
WO 01/93509 A1

(51) International Patent Classification<sup>7</sup>: H04L 12/54

(21) International Application Number: PCT/KR00/00860

(22) International Filing Date: 4 August 2000 (04.08.2000)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:  
2000-30109 1 June 2000 (01.06.2000) KR

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(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

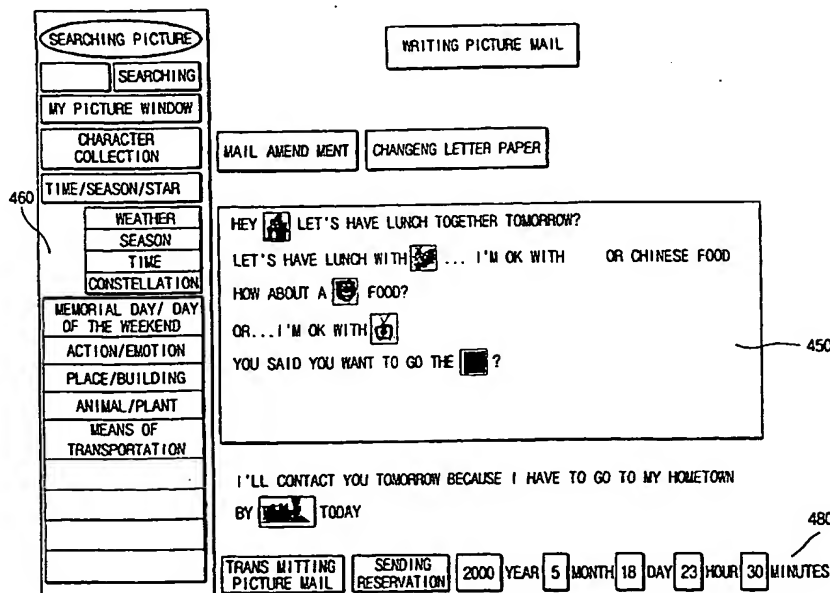
Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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(54) Title: IMAGE-INCLUDED DATA TRANSMISSION VIA ELECTRONIC MAIL SYSTEMS



(57) Abstract: The present invention relates to electronic mail including image transmission system and method. A web server coupled to a plurality of user terminal receives a text sentence composed of letters from donor. Also, the web server repeatedly receives image selection information among a plurality of images available. The web server inserts the selected image in the text message or converts a selected letter into the selected image, preferably into a predetermined commercial image. Then, the web server sends electronic mail including text sentence and one or more images to a recipient. The electronic mail system can be applied to a medium of advertisement.

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## Image-included Data Transmission Via Electronic Mail Systems

Technical Field

5           The present invention relates to a method and system for transmitting/receiving a picture mail, more particularly relates to a method and system for writing a picture mail inserted various pictures.

Background Art

10           Several communication methods have been attempted using the Internet, electronic mail (e-mail), the telephone and similar means. A text message can be delivered by using the e-mail in real time.

          With the e-mail methods, the user is restricted to the text message. Consequently, various creative intention of the user may be restricted within narrow limits.

15           Also, another problem with the e-mail method is that an effectiveness of advertising may slight because various advertising pictures cannot be inserted into the e-mail.

Disclosure of the Invention

20           The present invention is intended to overcome the above-mentioned disadvantages of an electronic mail (E-mail) method. Therefore, it is an object of the present invention to provide a method and system for transmitting/receiving a picture mail by using a communication network that provides various message made in accordance with the sender's creative intention.

          It is another object of the present invention to provide a method and system for

improving the effectiveness of advertising because various advertising pictures may be inserted into a text message.

To achieve the objects, one aspect of the present invention is a method for writing a picture mail by using a network. The method comprises the steps of receiving a text message from a user terminal, receiving a selected picture list among a plurality of predetermined picture lists from said user terminal, retrieving a plurality of pictures from a storage device, corresponding to the selected picture list, transmitting the retrieved pictures to said user terminal, receiving a selected picture from said user terminal, and generating a picture mail out of the text message by inserting the selected picture.

Moreover, the method further comprises the steps of retrieving a predetermined letter string in the text message and converting the letter string into a predetermined picture for the purpose of advertisement. Also, the method further comprises the step of receiving a position where the picture is inserted. Also, the method further comprises the step of receiving a completion notice of writing the text message from the user terminal. The network is at least one selected from the group of a wired communication network and a wireless communication network. The user terminal is at least one selected from the group of a personal computer and a mobile communication terminal.

Another aspect of the present invention is a method for registering picture that is used in a picture mail. The method comprises the steps of receiving a designated letter string from a user terminal by using a network, receiving a selected picture corresponding to the designated letter string from said user terminal, and storing link data between the designated letter string and the selected picture.

Moreover, the selected picture is stored in at least one selected from the group of a storage device included in said user terminal and a storage device included in a server. The

network is at least one selected from the group of a wired communication network and a wireless communication network. Also, the user terminal is at least one selected from the group of a personal computer and a mobile communication terminal.

Still another aspect of the present invention is a method for writing a picture mail  
5 by using a network. The method comprises the steps of receiving a text message from a user terminal, receiving a converting request for converting the text message into a picture mail from said user terminal, successively retrieving a predetermined letter string included in the text message by a predetermined way corresponding to the converting request, successively transmitting a plurality of pictures corresponding to the letter string to said  
10 user terminal, successively receiving a selected picture among the plurality of pictures from said user terminal, converting the letter string into the selected picture corresponded to the letter string, and transmitting the picture mail comprising the selected picture to said user terminal.

Still another aspect of the present invention is an apparatus for writing a picture  
15 mail by using a network. The apparatus comprises means for receiving at least one selected from the group of a text message, a selected picture list and a selected picture from a user terminal, means for retrieving a plurality of pictures from a storage device, corresponding to the selected picture list, means for generating a picture mail out of the text message by inserting the selected picture, and means for transmitting the plurality of retrieved pictures  
20 and the generated picture mail to said user terminal.

Moreover, the means for receiving receives a position where the picture is inserted and a completion notice of writing the text message from said user terminal.

Still another aspect of the present invention is an apparatus for registering picture that is used in a picture mail. The apparatus comprises means for receiving a designated

letter string and a selected picture corresponding to the designated letter string from a user terminal by using a network, and means for storing link data between the designated letter string and the selected picture.

5 Still another aspect of the present invention is an apparatus for writing a picture mail by using a network. The apparatus comprises means for receiving at least one selected from the group of a text message, a converting request and a selected picture from a user terminal, means for storing a plurality of pictures, means for successively retrieving a predetermined letter string included in the text message by a predetermined way corresponding to the converting request and for retrieving the picture from said means for  
10 storing, means for converting the letter string into the selected picture corresponded to the letter string, and means for transmitting the retrieved pictures and the picture mail comprising the selected picture to said user terminal.

Still another aspect of the present invention is an apparatus for writing a picture mail by using a network. The apparatus comprises a storage device and a processor  
15 coupled to said storage device, said storage device storing a program for controlling said processor and said processor operative with said program to receive a text message from a user terminal, receive a selected picture list among a plurality of predetermined picture lists from said user terminal, retrieve a plurality of pictures from a storage device, corresponding to the selected picture list, transmit the retrieved pictures to said user  
20 terminal, receive a selected picture from said user terminal and generate a picture mail out of the text message by inserting the selected picture.

Moreover, the processor further operative with said program to retrieve a predetermined letter string in the text message and convert the letter string into a predetermined picture for the purpose of advertisement. The processor further operative

with said program to receive a position where the picture is inserted. The processor further operative with said program to receive a completion notice of writing the text message from the user terminal.

Still another aspect of the present invention is an apparatus for registering picture  
5 that is used in a picture mail. The apparatus comprises a storage device, and a processor coupled to said storage device, said storage device storing a program for controlling said processor, and said processor operative with said program to receive a designated letter string from a user terminal by using a network, receive a selected picture corresponding to the designated letter string from said user terminal, and store link data between the  
10 designated letter string and the selected picture.

Still another aspect of the present invention is an apparatus for writing a picture mail by using a network. The apparatus comprises a storage device, and a processor coupled to said storage device, said storage device storing a program for controlling said processor, and said processor operative with said program to receive a text message from a  
15 user terminal, receive a converting request for converting the text message into a picture mail from said user terminal, successively retrieve a predetermined letter string included in the text message by a predetermined way corresponding to the converting request, successively transmit a plurality of pictures corresponding to the letter string to said user terminal, successively receive a selected picture among the plurality of pictures from said  
20 user terminal, convert the letter string into the selected picture corresponded to the letter string, and transmit the picture mail comprising the selected picture to said user terminal.

Still another aspect of the present invention is a computer-readable medium having stored thereon computer-executable instructions for performing the method comprising the steps of inputting a text message from a user terminal, inputting a selected picture list

among a plurality of predetermined picture lists, retrieving a plurality of pictures corresponding to the selected picture list, generating the retrieved pictures on a display coupled to the computer, inputting a selected picture among the retrieved pictures, and generating a picture mail out of the text message by inserting the selected picture on said display coupled to the computer.

Moreover, the instructions further perform the steps of retrieving a predetermined letter string in the text message, and converting the letter string into a predetermined picture for the purpose of advertisement.

Still another aspect of the present invention is a computer-readable medium having stored thereon computer-executable instructions for performing the method comprising the steps of storing a designated letter string for converting into a picture, storing a selected picture corresponding to the designated letter string, and storing link data between the designated letter string and the selected picture.

Still another aspect of the present invention is a computer-readable medium having stored thereon computer-executable instructions for performing the method comprising the steps of inputting a text message from a user terminal, inputting a converting request for converting the text message into a picture mail from said user terminal, successively retrieving a predetermined letter string included in the text message by a predetermined way corresponding to the converting request, successively generating a plurality of pictures corresponding to the letter string on a display coupled to the computer, successively inputting a selected picture among the plurality of pictures, converting the letter string into the selected picture corresponded to the letter string, and generating the picture mail comprising the selected picture on the display coupled to the computer.

Still another aspect of the present invention is a method for generating sound. The

method comprises the steps of detecting an approaching signal within a predetermined area, the approaching signal is generated from a inputting means coupled a user terminal and the center of the predetermined area is a position of a picture, retrieving a predetermined sound corresponding to the picture based on the approaching signal, generating the retrieved sound.

#### Brief Description of the Drawings

The above objects and other advantages of the present invention will become more apparent in detailed descriptions of the preferred embodiments thereof with reference to the attached drawings, in which:

FIG. 1 is a schematic illustration of a picture mail providing system (server) based on a network in accordance with one preferred embodiment of the present invention;

FIG. 2 is a flowchart illustrating a picture mail transmitting/receiving process in accordance with one preferred embodiment of the present invention;

FIG. 3 is a flowchart illustrating a picture mail transmitting/receiving process in accordance with another preferred embodiment of the present invention;

FIG. 4 is an illustration for transmitting a picture mail to a recipient in accordance with one preferred embodiment of the present invention;

FIG. 5 is an illustration of preview picture mail in accordance with one preferred embodiment of the present invention; and

FIG. 6 is an illustration for transmitting a picture mail to a recipient in accordance with another preferred embodiment of the present invention.



### Best Modes for carrying out the Invention

Hereinafter, preferred embodiments of the present invention will be described in more detail with reference to the accompanying drawings, but it is understood that the present invention should not be limited to the following embodiments.

5           FIG. 1 is a schematic illustration of a picture mail providing system (server) based on a network in accordance with one preferred embodiment of the present invention.

Referring to FIG. 1, the picture mail providing system (hereinafter referred to as the picture mail server) 120 comprises a storage device 130, and it is coupled to user computers (or terminals) 110a, 110b (hereinafter referred to as 110) via a communication  
10       network. The communication network includes the Internet, a mobile communication network, a PSTN and similar means.

A sender logs on the picture mail server by using the user computer 110 coupled to the communication network. He/she writes a specific message and requests the picture mail server to transmit it after that he/she input a recipient's electronic mail address. Then,  
15       the picture mail server transmits the message to the recipient. The message (mail) that the sender wants to send includes text data, graphic data, image data and similar one. A detail description of it will be disclosed with illustrations.

Also, the recipient may read the received message by using a mail program (for example, the outlook express) included in the user computer 110 coupled to the  
20       communication network or by accessing a specific site (for example, yahoo (<http://www.yahoo.co.kr>)) that provides a e-mail service.

FIG. 2 is a flowchart illustrating a picture mail transmitting/receiving process in accordance with one preferred embodiment of the present invention.

Referring to FIG. 2, the picture mail server receives an access request from the

user computer (terminal) (Step 210). Then, the picture mail server transmits a web page with which the sender may input a text message (Step 220). The step 310 may further include the steps of receiving accessing data including a user identifier and a password and certifying the accessing data.

5           The picture mail server receives a text message from the sender's terminal (Step 230). The text message means that the message is composed of letters. The text message may be generated on a display device (for example, a monitor). The picture mail server determines whether or not a picture request is received (Step 240). The picture request means a request for inserting a specific picture in the text message. If the picture request is  
10       received, the picture mail server performs step 250. Otherwise, it performs step 260.

          At step 250, the picture mail server transmits a plurality of predetermined picture lists to the sender terminal and receives a selected picture list from the sender terminal. Then, the picture mail server transmits a plurality of pictures that correspond to the selected picture list to the sender terminal and receives a selected picture that the sender  
15       selects among the plurality of pictures from the sender terminal. A detail description of step 250 will be followed.

          The picture mail server generates a plurality of factors (for example, a character collection, time/season/star, action and emotion, memorial day and a day of the week) on a display device of the sender terminal (for example, a computer monitor). If the sender  
20       selects 'time/season/star', the picture mail server generates a plurality of detail factors (for example, weather, season, time, constellation) corresponding to the selected factor, 'time/season/star' on the display device. If the sender selects 'weather', the picture mail server generates a plurality of pictures (for example, picture of 'sun', 'rain', 'cloud', 'fog') corresponding to the selected detail factor 'weather' on the display device. If the sender

selects picture of 'sun', the selected 'sun' picture may be inserted into one portion where a cursor is, of the message. Hereinafter, the text message inserted pictures is referred to a picture mail.

At step 260, the picture mail server determines whether or not writing the picture mail is completed. If writing the picture mail is completed, the picture mail server performs step 270. Otherwise, it returns step 230.

At step 270, the picture mail server generates a preview of the picture mail. At step 280, the picture mail server determines whether or not a transmission request for the picture mail is received. If the transmission request for the picture mail is received, the picture mail server terminates the procedure. Otherwise, it returns to step 230.

FIG. 3 is a flowchart illustrating a picture mail transmitting/receiving process in accordance with another preferred embodiment of the present invention.

Referring to FIG. 3, the picture mail server receives an access request from the user computer (terminal) (Step 310). Then, the picture mail server transmits a web page with which the sender may input a text message (Step 320). The step 310 may further include the steps of receiving accessing data including a user identifier and a password and certifying the accessing data.

The picture mail server receives a text message from the sender's terminal (Step 330). The text message may be generated on the display device. The picture mail server determines whether or not a picture request is received (Step 340). If the picture request is received, the picture mail server performs step 350. Otherwise, it performs step 380.

At step 350, the picture mail server retrieves a predetermined letter string included in the text message. Then, the picture mail server transmits a plurality of pictures corresponding to the retrieved letter string to the sender's terminal and receives a selected

picture among the transmitted pictures from the sender's terminal (Step 360).

At step 370, the picture mail server determines whether or not there is any predetermined letter string (Step 370). If there is some predetermined letter string, the picture mail server performs step 350. Otherwise, it performs step 380. A detail description  
5 of step 330 ~ step 370 will be followed. In this case, the predetermined letter string is 'love' and 'friendship' and the text message is 'Love and friendship, which one is more important?'.

At step 350, the picture mail server retrieves the predetermined letter string, 'love', out of the text message. Then, the picture mail server transmits a plurality of pictures  
10 corresponding to the predetermined letter string 'love' to the sender's terminal. The sender selects a picture among the transmitted pictures displayed on the display device of the sender's terminal.

Also, at step 370, the picture mail server determines whether or not there is any predetermined letter string. The picture mail server retrieves the predetermined letter string  
15 'friendship' and returns to step 350.

At step 380, the picture mail server determines whether or not writing the picture mail is completed. If writing the picture mail is completed, the picture mail server performs step 390. Otherwise, it performs step 330.

At step 270, the picture mail server generates a preview of the picture mail. At step  
20 400, the picture mail server determines whether or not a transmission request for the picture mail is received. If the transmission request for the picture mail is received, the picture mail server terminates the procedure. Otherwise, it returns to step 330.

FIG. 4 is an illustration for transmitting a picture mail to a recipient in accordance with one preferred embodiment of the present invention.

Referring to FIG. 4, a writing picture mail page includes a transmitting/receiving data frame 440, a message frame 450, a picture factor selection frame 460, a picture selection frame 470, and e-mail transmitting data frame 480. Also, the writing picture mail page further includes an advertising picture frame 490 for inputting a specific advertising picture.

The transmitting/receiving data frame 440 may include an 'e-mail's title' factor, a 'sender's e-mail address' factor, a 'recipient's e-mail address' factor, and 'attach file' factor. In the case of certifying the accessing data (user ID and password), the 'sender's e-mail address' factor 440 may be omitted.

The sender may input message in the message frame 450. Text data or picture data may be inserted in the message frame 450.

By using the picture factor selection frame 460, a plurality of picture factors may be generated. The picture factor selection frame 460 may include 'my picture window' factor, 'character collection' factor, 'time/season/star' factor, 'memorial day/day of the weekend' factor and similar ones. Each factor may include particular factors (for example, 'weather', 'season', 'time', and 'constellation'). The 'my picture window' factor included in the picture factor selection frame 460 is used for storing a plurality of pictures of high frequency of use. The sender may input the pictures of high frequency of use in the 'my picture window' factor. The pictures stored by using the 'my picture window' factor, may be provided by the picture mail server or be extracted from an external picture source (for example, a plurality of pictures stored in storage device included in the sender's terminal).

Also, the picture factor selection frame 460 may further include a 'picture link' factor for linking the predetermined letter sting and the specific picture in accordance with sender's designating. For example, the sender selects the 'picture link' factor and links the

sender's 'name' to a specific picture. The specific picture may be included in a plurality of pictures in the picture factor selection frame 460. Then, the sender's 'name' may be converted into the linked picture, when the sender inputs his/her 'name', as a predetermined letter string.

5           By using the picture selection frame 470, a plurality of pictures included in a selected factor may be generated, when the sender selects a specific factor by using the picture factor selection frame 460. Referring to FIG. 4, a plurality of pictures are generated when the sender selects a 'means of transportation' factor included in the picture selection frame 470. A 'train' inputted by the sender may be converted into a specific picture  
10           corresponding to the 'train', when the sender selected the specific picture among a plurality of pictures related to the 'means of transportation'.

          The e-mail transmitting data frame 480 may include a 'preview' factor and a 'sending reservation' factor. When the sender inputs a date and a time for sending reservation and clicks on the 'sending reservation' factor, the picture mail server transfers a  
15           picture mail at the date and the time. Also, when the sender clicks on the 'preview' factor, an illustration illustrated in FIG. 5 is displayed on the display device included in the sender's terminal.

          The writing picture mail page may further include an advertising picture frame 490. A predetermined letter string included in the text message is converted into a specific  
20           advertising picture by using the advertising picture frame 490, regardless of the sender's intention. Also, when the sender clicks on the 'preview' factor or a 'transmitting' factor, a plurality of predetermined pictures may be displayed on the display device included in the sender's terminal and selected by the sender. A detail description of the 'message' frame 450 and the 'advertising picture' frame 490 will be followed.

Referring to FIG. 4 again, pictures of 'McDonald' and 'Pizza Hut' are generated in the 'advertising picture' frame 490. When the sender inputs a predetermined letter string (for example, 'hamburger' or 'McDonald'), the picture of 'McDonald' is generated regardless of the sender's intention. Similarly, when the sender inputs a predetermined letter sting (for example, 'pizza'), the picture of 'Pizza Hut' is generated regardless of the sender's intention.

FIG. 5 is an illustration of preview picture mail in accordance with one preferred embodiment of the present invention.

Referring to FIG. 5, a preview picture mail page may include the picture factor selection frame 460, the e-mail transmitting data frame 480, a preview frame 500 and a mail amendment frame 510. A detail description with referring to FIG. 4 will be omitted, avoid duplication.

By using the preview frame 500, a message composed of a plurality of pictures may be displayed on the preview frame 500. If the sender wishes to amend the message, the mail amendment frame 510 facilitates the message amendment. Also, if the sender wishes to change the letter paper, the changing letter paper factor may facilitate the letter paper change.

When the recipient received the picture mail generates an approaching signal if a cursor from an inputting means (for example, a mouse) included in the recipient's terminal is put within a predetermined area (the center of the predetermined area is a position of a advertising picture), the picture mail server generates an advertisement (for example, a 'McDonald' CM song) by using an output device (for example, a speaker) included in the recipient's terminal.

FIG. 6 is an illustration for transmitting a picture mail to a recipient in accordance

with another preferred embodiment of the present invention.

Referring to FIG. 6, a writing picture mail page may include a transmitting/receiving data frame 540, a message frame 550, a picture factor selection frame 560, a picture selection frame 570, and an e-mail transmitting data frame. Also, the writing picture mail page may further include an advertising picture frame for inserting a specific advertising picture into a text message. A detail description with referring to FIG. 4 will be omitted, avoid duplication.

The e-mail transmitting data frame may include a 'converting' factor, a 'preview' factor, a 'transmitting picture mail' factor and a 'sending reservation' factor. If the sender clicks on the 'converting' factor, the picture mail server retrieves a predetermined letter string and generates a plurality of pictures corresponding to the predetermined letter string. Also, in the picture selection frame 570, a 'undo' factor and a 'user's picture' factor are generated as well as a plurality of pictures. The sender may select a picture among the generated pictures, undo the selection by using the 'undo' factor or insert a picture stored in the storage device included in the sender's terminal by using the 'user's picture' factor. Though a predetermined letter string is not retrieved, the sender may convert some letters into a specific picture by using the picture factor selection frame 560.

A picture mail transmitting/receiving program on a self-processing basis may be provided in the storage device included in the sender's terminal in accordance with another preferred embodiment of the present invention. In this case, a plurality of pictures may be applied to pictures stored in the storage device included in the sender's terminal.

A picture mail writing program on a self-processing basis may be provide in the storage device included in the sender's terminal in accordance with still another preferred embodiment of the present invention. In this case, the sender's terminal is coupled to the



picture mail server via the communication network and the picture mail server performs transmitting/receiving the picture mail made by the picture mail writing program.

Although the present invention has been described in terms of various embodiments, it is not intended that the invention be limited to these embodiments.

5 Modification within the spirit of the invention will be apparent to those skilled in the art.

#### Industrial Applicability

One advantage of the method and system for writing picture mail by suing a communication network is that various message may be made in accordance with the sender's creative intention.

Another advantage of the method and system for writing picture mail by using a communication network is that an effectiveness of advertising may be elevated because various advertising pictures may be inserted into a text message.

Claims

1. A method for writing a picture mail by using a network, comprising the steps of:  
receiving a text message from a user terminal;  
5 receiving a selected picture list among a plurality of predetermined picture lists from said user terminal;  
retrieving a plurality of pictures from a storage device, corresponding to the selected picture list;  
transmitting the retrieved pictures to said user terminal;  
10 receiving a selected picture from said user terminal; and  
generating a picture mail out of the text message by inserting the selected picture.
2. The method of claim 1, further comprising the steps of:  
15 retrieving a predetermined letter string in the text message; and  
converting the letter string into a predetermined picture for the purpose of advertisement.
3. The method of claim 1, further comprising the step of receiving a position where  
20 the picture is inserted.
4. The method of claim 1, further comprising the step of receiving a completion notice of writing the text message from the user terminal.

5. The method of claim 1, wherein said network is at least one selected from the group of a wired communication network and a wireless communication network.

5 6. The method of claim 1, wherein said user terminal is at least one selected from the group of a personal computer and a mobile communication terminal.

7. A method for registering picture that is used in a picture mail, comprising the steps of:

10 receiving a designated letter string from a user terminal by using a network;  
receiving a selected picture corresponding to the designated letter string from said user terminal; and  
storing link data between the designated letter string and the selected picture.

15 8. The method of claim 7, wherein the selected picture is stored in at least one selected from the group of a storage device included in said user terminal and a storage device included in a server.

20 9. The method of claim 7, wherein said network is at least one selected from the group of a wired communication network and a wireless communication network.

10. The method of claim 7, wherein said user terminal is at least one selected from the group of a personal computer and a mobile communication terminal.

11. A method for writing a picture mail by using a network, comprising the steps of:

receiving a text message from a user terminal;

receiving a converting request for converting the text message into a picture mail from said user terminal;

5 successively retrieving a predetermined letter string included in the text message by a predetermined way corresponding to the converting request;

successively transmitting a plurality of pictures corresponding to the letter string to said user terminal;

10 successively receiving a selected picture among the plurality of pictures from said user terminal;

converting the letter string into the selected picture corresponded to the letter string; and

transmitting the picture mail comprising the selected picture to said user terminal.

15 12. An apparatus for writing a picture mail by using a network, comprising:

means for receiving at least one selected from the group of a text message, a selected picture list and a selected picture from a user terminal;

20 means for retrieving a plurality of pictures from a storage device, corresponding to the selected picture list;

means for generating a picture mail out of the text message by inserting the selected picture; and

means for transmitting the plurality of retrieved pictures and the generated picture mail to said user terminal.

13. The apparatus of claim 12, wherein said means for receiving receives a position where the picture is inserted and a completion notice of writing the text message from said user terminal.

5

14. An apparatus for registering picture that is used in a picture mail, comprising:  
means for receiving a designated letter string and a selected picture corresponding to the designated letter string from a user terminal by using a network; and

10

means for storing link data between the designated letter string and the selected picture.

15. An apparatus for writing a picture mail by using a network, comprising:

15

means for receiving at least one selected from the group of a text message, a converting request and a selected picture from a user terminal;

means for storing a plurality of pictures;

means for successively retrieving a predetermined letter string included in the text message by a predetermined way corresponding to the converting request and for retrieving the picture from said means for storing;

20

means for converting the letter string into the selected picture corresponded to the letter string; and

means for transmitting the retrieved pictures and the picture mail comprising the selected picture to said user terminal.

16. An apparatus for writing a picture mail by using a network, comprising:

a storage device; and

a processor coupled to said storage device,

said storage device storing

a program for controlling said processor; and

said processor operative with said program to receive a text message from a user terminal;

receive a selected picture list among a plurality of predetermined picture lists from said user terminal;

retrieve a plurality of pictures from a storage device, corresponding to the selected picture list;

transmit the retrieved pictures to said user terminal;

receive a selected picture from said user terminal; and

generate a picture mail out of the text message by inserting the selected picture.

17. The apparatus of claim 16, said processor further operative with said program to retrieve a predetermined letter string in the text message and convert the letter string into a predetermined picture for the purpose of advertisement.

18. The apparatus of claim 16, said processor further operative with said program to receive a position where the picture is inserted.

19. The apparatus of claim 16, said processor further operative with said program to receive a completion notice of writing the text message from the user terminal.

20. An apparatus for registering picture that is used in a picture mail, comprising:

5           a storage device; and  
          a processor coupled to said storage device,  
          said storage device storing  
          a program for controlling said processor; and  
          said processor operative with said program to receive a designated letter  
10       string from a user terminal by using a network;  
          receive a selected picture corresponding to the designated letter string from  
          said user terminal; and  
          store link data between the designated letter string and the selected picture,

15       21. An apparatus for writing a picture mail by using a network, comprising:

          a storage device; and  
          a processor coupled to said storage device,  
          said storage device storing  
          a program for controlling said processor; and  
20       said processor operative with said program to receive a text message from a  
          user terminal;  
          receive a converting request for converting the text message into a picture  
          mail from said user terminal;

successively retrieve a predetermined letter string included in the text message by a predetermined way corresponding to the converting request; successively transmit a plurality of pictures corresponding to the letter string to said user terminal;

5 successively receive a selected picture among the plurality of pictures from said user terminal;

convert the letter string into the selected picture corresponded to the letter string; and

transmit the picture mail comprising the selected picture to said user terminal.

10

22. A computer-readable medium having stored thereon computer-executable instructions for performing the method comprising the steps of:

inputting a text message from a user terminal;

inputting a selected picture list among a plurality of predetermined picture

15 lists;

retrieving a plurality of pictures corresponding to the selected picture list;

generating the retrieved pictures on a display coupled to the computer;

inputting a selected picture among the retrieved pictures; and

generating a picture mail out of the text message by inserting the selected

20 picture on said display coupled to the computer.

23. The computer-readable medium of claim 22, wherein said instructions further perform the steps of:

retrieving a predetermined letter string in the text message; and



converting the letter string into a predetermined picture for the purpose of advertisement.

24. The computer-readable medium of claim 22, wherein said instructions further  
5 perform the step of receiving a position where the picture is inserted.

25. A computer-readable medium having stored thereon computer-executable instructions for performing the method comprising the steps of:

storing a designated letter string for converting into a picture;

10 storing a selected picture corresponding to the designated letter string; and

storing link data between the designated letter string and the selected picture.

26. A computer-readable medium having stored thereon computer-executable instructions for performing the method comprising the steps of:

15 inputting a text message from a user terminal;

inputting a converting request for converting the text message into a picture  
mail from said user terminal;

successively retrieving a predetermined letter string included in the text  
message by a predetermined way corresponding to the converting request;

20 successively generating a plurality of pictures corresponding to the letter  
string on a display coupled to the computer;

successively inputting a selected picture among the plurality of pictures;

converting the letter string into the selected picture corresponded to the letter  
string; and

generating the picture mail comprising the selected picture on the display coupled to the computer.

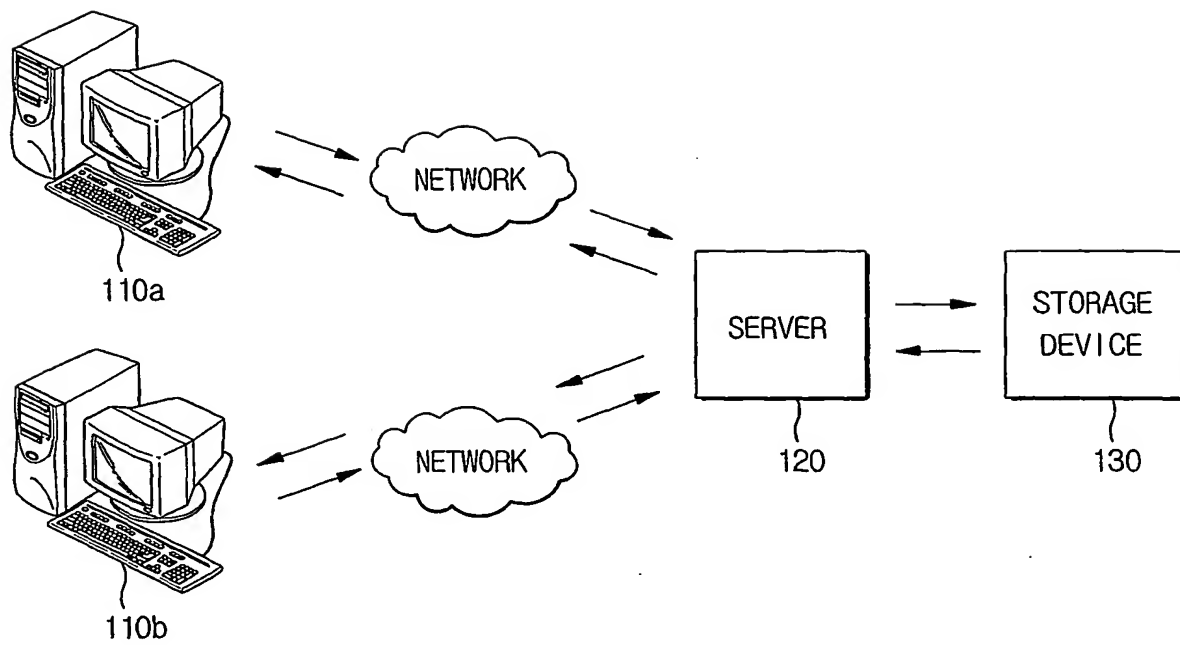
27. A method for generating sound, comprising the steps of:

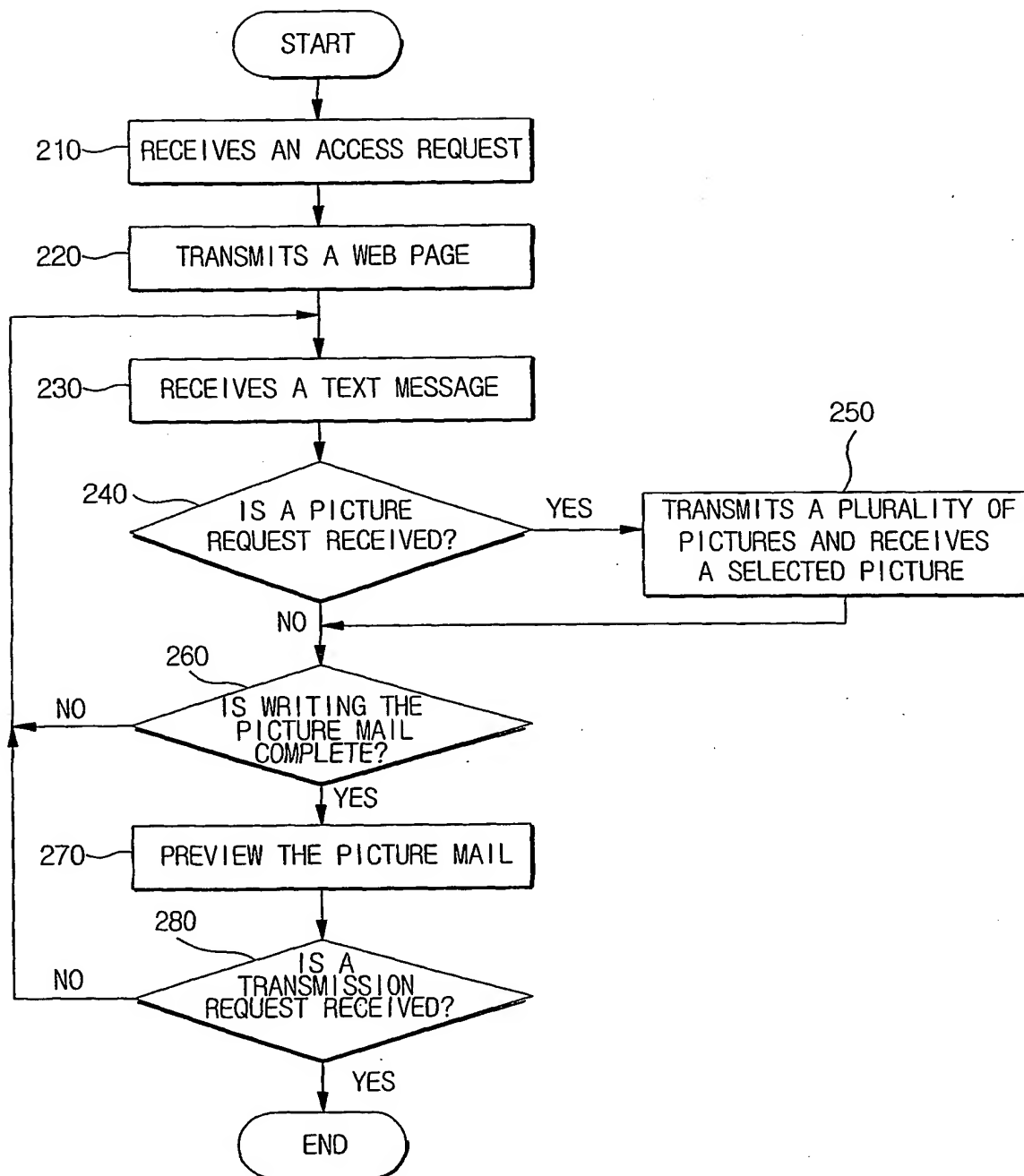
5           detecting an approaching signal within a predetermined area, the approaching signal is generated from a inputting means coupled a user terminal and the center of the predetermined area is a position of a picture;

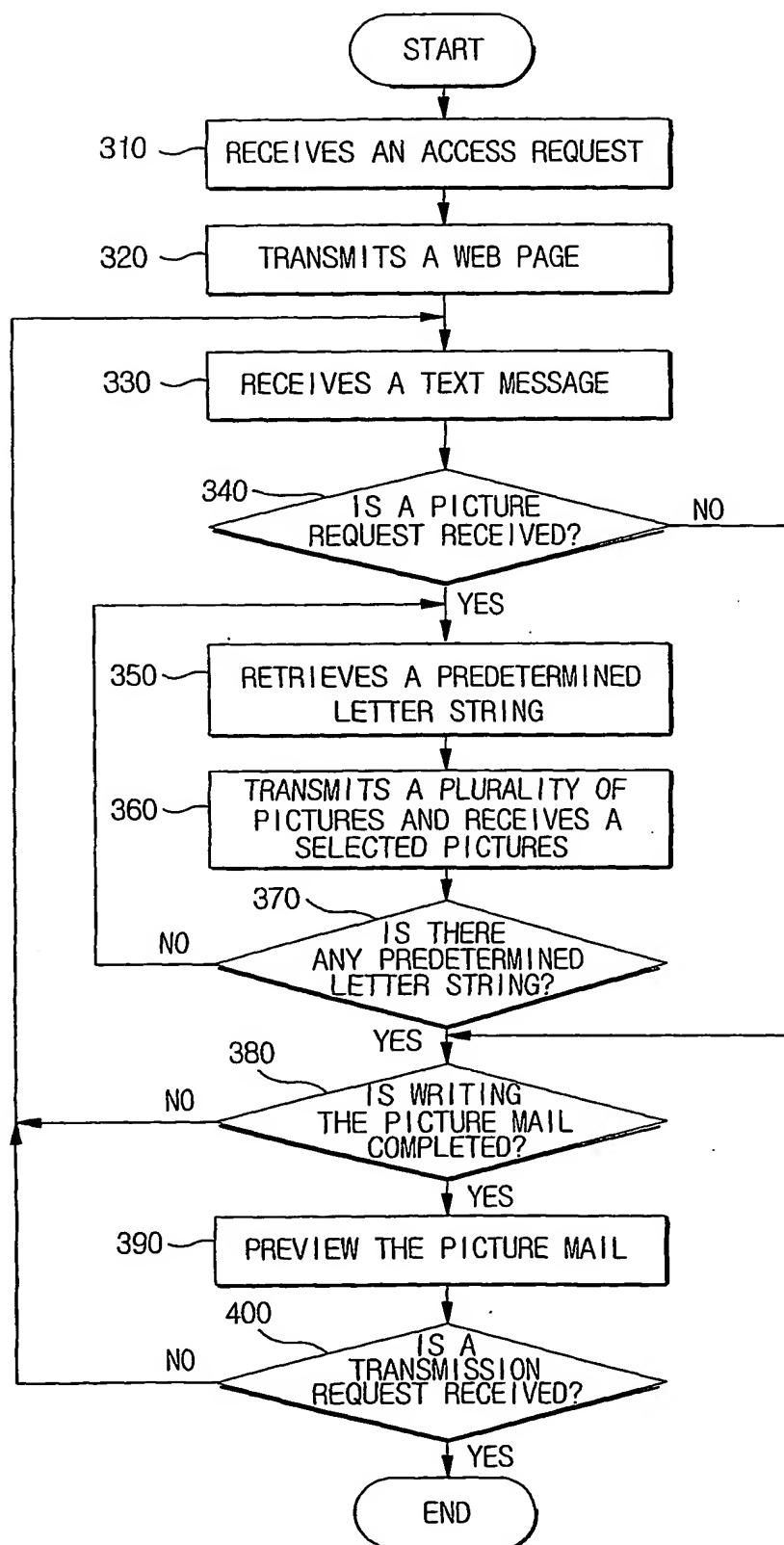
          retrieving a predetermined sound corresponding to the picture based on the approaching signal;

10           generating the retrieved sound.

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FIG. 1



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FIG. 2

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FIG. 3

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FIG. 4

SEARCHING PICTURE

SEARCHING

MY PICTURE WINDOW

CHARACTER COLLECTION

TIME/SEASON/STAR

WEATHER

SEASON

TIME

CONSTELLATION

MEMORIAL DAY/ DAY OF THE WEEKEND

ACTION/EMOTION

PLACE/BUILDING

ANIMAL/PLANT

MEANS OF TRANSPORTATION

WRITING PICTURE MAIL

MAKING MY PICTURE WINDOW

SELECTING LETTER PAPER

ADDRESS BOOK

ADDRESS REGISTRATION

TITLE WHAT SHALL WE HAVE?


SENDER'S E-MAIL jedai@zzmail.co.kr


ATTACH FILE


CONFIRMATION

RECIPIENT'S E-MAIL pax@yahoo.com

MEANS OF TRANSPORTATION

HEY  LET'S HAVE LUNCH TOGETHER TOMORROW?

LET'S HAVE LUNCH WITH  ... I'M OK WITH HAMBURGER OR CHINESE FOOD

HOW ABOUT A  FOOD?

OR... I'M OK WITH PIZZA

YOU SAID YOU WANT TO GO TO THE MCDONALD?

I'LL CONTACT YOU TOMORROW BECAUSE I HAVE TO GO TO MY HOMETOWN BY TRAIN TODAY

PREVIEW

SENDING RESERVATION

2000

YEAR

5

MONTH

18

DAY

23

HOUR

30

MINUTES

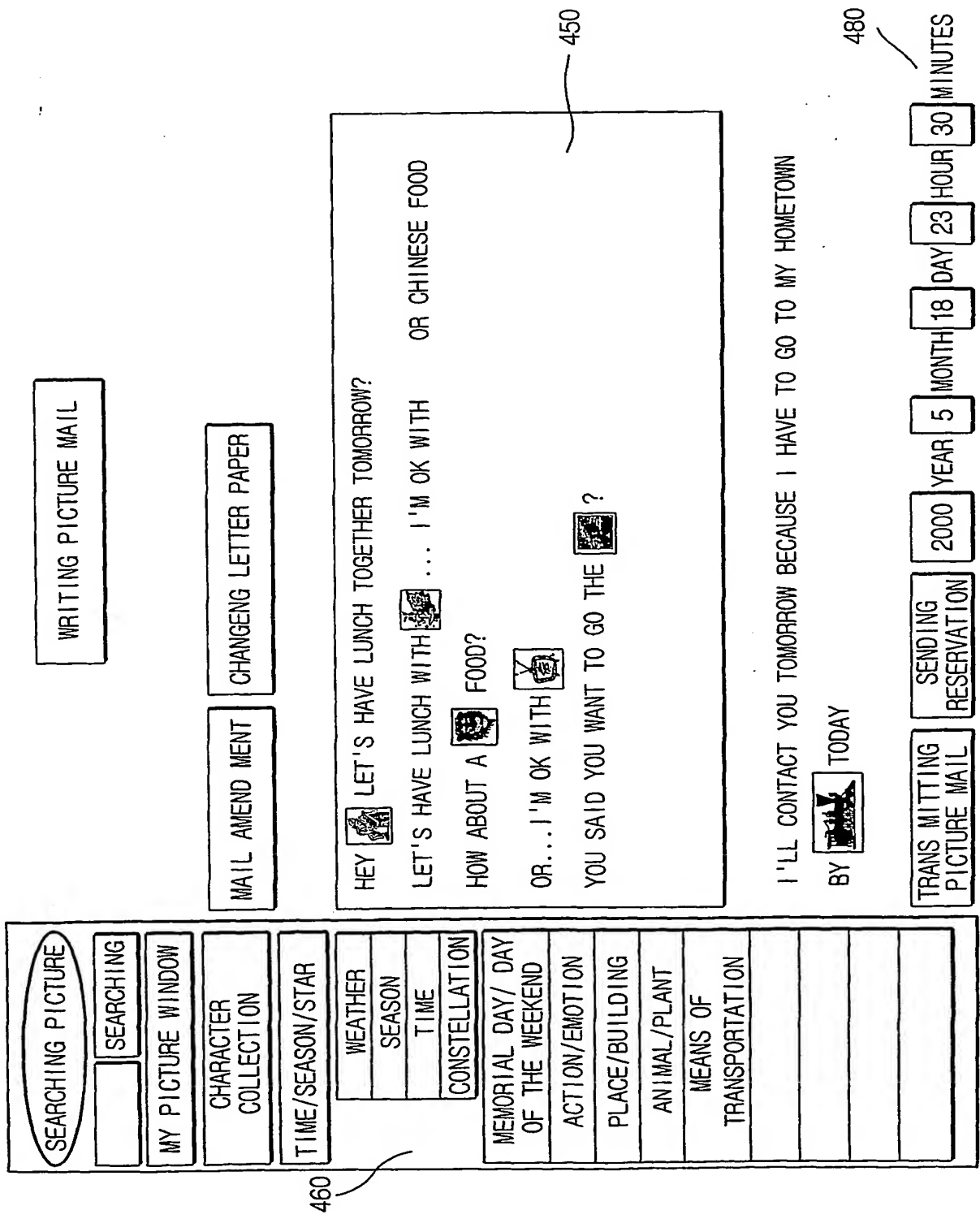
440

490

450

480

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FIG. 5



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FIG. 6

SEARCHING PICTURE

SEARCHING

MY PICTURE WINDOW

CHARACTER COLLECTION

TIME/SEASON/STAR

WEATHER

SEASON

TIME

CONSTELLATION

MAKING MY PICTURE WINDOW

SELECTING LETTER PAPER

ADDRESS BOOK

ADDRESS REGISTRATION

TITLE

WHAT SALL WE HAVE?

ATTACH FILE

CONFIRMATION

SENDER'S E-MAIL

jeda1@zzmail1.co.kr

RECIPIENT'S E-MAIL

pax@yahoo.com

MEANS OF TRANSPORTATION

UNDO

USER'S PICTURE

HEY LET'S HAVE LUNCH TOGETHER TOMORROW?

LET'S HAVE LUNCH WITH ... I'M OK WITH HAMBURGER OR CHINESE FOOD

HOW ABOUT A FOOD?

OR... I'M OK WITH PIZZA

YOU SAID YOU WANT TO GO TO THE MCDONALD?

I'LL CONTACT YOU TOMORROW BECAUSE I HAVE TO GO TO MY HOMETOWN BY TRAIN TODAY

CONVERTING

PREVIEW

SENDING RESERVATION

2000

YEAR

5

MONTH

18

DAY

23

HOUR

30

MINUTES

560

540

590

450

580



## INTERNATIONAL SEARCH REPORT

international application No.

PCT/KR00/00860

**A. CLASSIFICATION OF SUBJECT MATTER****IPC7 H04L 12/54**

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC7 H04L 12/54

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean patents and applications for inventions since 1975

Korean utility models and applications for utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

http://www.espacenet.com(Worldwide Search in the European Patent Office), "electronic mail image transmission"

IEEE/IEEE Electronic Library (Since 1988) "electronic mail image"

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category* | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
|-----------|--|-----------------------|
| X         | EP 898410 A (CANON KABUSHIKI KAISHA) 24 February 1999 (24.02.1999)<br>the whole document   | 1-26                  |
| Y         | US 6,014,634(SUPERMARKETS ONLUNE INC) 11 January 2000 (11.01.2000)<br>the whole document   | 1-27                  |
| Y         | A practical adaptive image compression technique using visual criteria for still-picture<br>transmission with electronic mail<br>Seitz, P.; Lang, G.K.<br>Communications, IEEE Transactions on<br>Published: July 1990<br>Volume: 38 7 , Page(s): 947 -949 | 1-27                  |
| Y         | Graphical knowledge based electronic mail system (GKBEMS)<br>Kantardzic, M.; Milicic, N.; Jusupovic, U.<br>Electrotechnical Conference, 1991. Proceedings., 6th Mediterranean<br>Published: 1991 , Page(s): 1165 -1168 vol.2                               | 1-27                  |

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance.

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

20 JANUARY 2001 (20.01.2001)

Date of mailing of the international search report

22 JANUARY 2001 (22.01.2001)

Name and mailing address of the ISA/KR

Korean Industrial Property Office  
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Telephone No. 82-42-481-5684



## INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR00/00860

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
|-----------|--|-----------------------|
| Y         | The MOS multimedia E-mail system<br>Ming Ouhyoung; Wen-Chin Chen; Yuong-Wei Lei; Keh-Ning Chang; Ching-Lun Liang; Shwu-Fen Wang; Yung-Huei Yan; Jiann-Rong Wu; Herng-Yow Chen; Nien-Bao Liu; Yin-Lai Wang; Tzong-Yin Hwu; Wei-Ming Su; Rung-Heui Liang; Kuo-Chang Fu; Yah Chen; Tzong-Jer Yang<br>Multimedia Computing and Systems, 1994., Proceedings of the International Conference on<br>Published: 1994 , Page(s): 315 -324 | 1-27                  |
| Y         | The BERKOM multimedia-mail teleservice<br>Hofrichter, K.; Moeller, E.; Scheller, A.; Schurmann, G.<br>Distributed Computing Systems, 1993., Proceedings of the Fourth Workshop on Future Trends of<br>Published: 1993 , Page(s): 23 -30  | 1-27                  |
| A         | KR 2000-24118 A (EOM, JIN-YOUNG) 06 May 2000 (06.05.2000)<br>the whole document  | 1-27                  |

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

PCT/KR00/00860

| Patent document<br>cited in search report | Publication<br>date | Patent family<br>member(s) | Publication<br>date |
|---|---------------------|----------------------------|---------------------|
| EP 898410 A                               | 24.02.1999          | JP 11065963 A              | 09.03.1999          |
| US 6,014,634 A                            | 11.01.2000          | None                       |                     |
| KR 2000-24118                             | 06.05.2000          | None                       |                     |

